

REMARKS

Claims 1-3, 5-6, 10-13 and 21-25 are amended herein. Support is found, for example, in the original claims and at page 3, lines 16-17, page 4, lines 1-2, page 5, lines 18-19, and page 9, lines 5-8 of the specification. No new matter is presented.

I. Response to Obviousness-Type Double Patenting Rejections

In paragraph 1 of the Office Action, claims 1-20 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claim 1-4, 7-10, and 15-20, of co-pending Application No. 10/583,339 (U.S. Pub. No. 2007/0164468).

In paragraph 2 of the Office Action, claims 1 and 3-20 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1, 3, 4, 6, 7, and 9-17 of co-pending Application No. 10/583,340 (U.S. Pub. No. 2007/0163735).

In paragraph 3 of the Office Action, claims 1-20 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-5, 9, 11-16, 18-21, 23-26, 29, 32, and 33 of co-pending Application No. 10/583,712 (U.S. Pub. No. 2007/0130362).

In paragraph 4 of the Office Action, claims 1-20 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claim 1-5, 7, 9-12, and 16-25 of co-pending Application No. 10/583,849 (U.S. Pub. No. 2007/0143932).

Applicants submit a Terminal Disclaimer herewith with respect to the '339, '712 and '849 applications, thereby obviating the rejections.

Applicants defer responding to the rejection based on the '340 application.

Accordingly, Applicants request withdrawal of the obviousness-type double patenting rejections.

II. Response to Claim Rejections under 35 U.S.C. § 112

In paragraph 5 of the Office Action, claims 5, 6, 15, 16, and 19 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

With respect to claim 5, the Examiner asserts that the phrase “such as” renders the claim indefinite. Claim 6 is rejected as being dependent on claim 5.

Claim 16 is rejected because the phrase “in particular” is said to render the claim indefinite.

Claims 15 and 19 are rejected for reciting both a broad range and narrow range in the same claim. In claim 15 the Examiner states that recitation of “an amount of 0.0001 to 10 mg protein/g of dry matter” is a third range.

Further, with respect to claim 15, the Examiner states that the enzyme dosage. “nkat/g”, is interpreted as referring to enzyme activity on pulp. However, the Examiner states that Applicants do not state what the defined assay conditions are for measuring the enzyme activity and therefore the Examiner cannot determine the proper metes and bounds of the claim since an enzyme can have different activity at different temperatures, pHs and depending on the substrate being oxidized.

Claims 5, 15, 16 and 19 are amended by deleting improper phrases and new claims directed to the deleted subject matter are added.

Regarding the recitation of the amount of 0.0001 to 10 mg protein/g of dry matter, Applicants submit that this range is a separate range from the enzyme dosage and therefore is not a narrower range of the enzyme dosage. Therefore, Applicants traverse this ground for rejection.

Applicants also traverse the rejection of claim 15. Regarding claim 15, the conditions for determining enzyme activity are described in the working examples. Activity/amount of fibre and protein concentration are different ways of dosing and the proposed response is quite ok. The determination of the enzyme activities has been carried out in the examples in the same conditions (pH, temperature) using standard activity measurements in the conditions in which the enzyme treatments of the materials have been effected.

Thus, in view of the above, one of ordinary skill in the art is readily able to ascertain the meaning and scope of the claims, when properly read in light of the specification.

Accordingly, Applicants respectfully request withdrawal of the §112, 2nd paragraph, rejection.

III. Response to Claim Rejections under 35 U.S.C. § 102

A. Pederson et al (US 6,187,136)

In paragraph 8 of the Office Action, claims 1-14 and 16-20 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 6,187,136 to Pedersen et al (hereinafter "Pederson").

Applicants traverse the rejection.

With respect to claim 1, based on pages 10 and 11 of the Office Action, the Examiner seems to think that the incorporation of pherulic acid to fibre introduces a property "foreign" to the fibre. This is however not correct. The pherulic acid merely increases the negative charge

which the fibre has by nature and it does not introduce properties foreign to the fibre. For at least this reason, claim 1 is not anticipated.

Claims 3-14 and 16-20 depend directly, or indirectly, from claim 1 and are not anticipated for at least the same reasons.

Regarding claim 2, the Examiner has made the interpretation (page 11) that the polyacrylate which is bonded to the pherulic acid modified fibre is a signalling agent according to the present invention. However, this is not correct because the polyacrylate is not chemically bonded to the fibres as is the signalling agent of the present invention. Rather, the polyacrylate merely adsorbs to the pherulic acid modified fibre (charge adsorption). For at least this reason, claim 2 is not anticipated.

Further, regarding claims 3 and 4, the significance of the “mediator” mentioned by the Examiner in the sentence: “...the enzyme oxidizes the phenolic structures and that the mediator is bonded to the fibres” is unclear since Pedersen does not mention any mediators. For this additional reason, claims 3 and 4 are not anticipated.

Regarding claims 5, 6, 9, Applicants submit that pherulic acid does not achieve any conductivity in the fibre and it certainly does not (according to Pedersen or in any other case) prevent yellowing. Therefore, it is not a “signalling agent”. For this additional reason, claims 5, 6 and 9 are not anticipated.

Regarding claims 7, 8, 10 and 11, all of the groups mentioned by Pedersen introduce a negative charge into the fibre and they are not signalling agents as in the present invention. For this additional reason, claims 7, 8, 10 and 11 are not anticipated.

Accordingly, Applicants respectfully request withdrawal of the §102 rejection based on Pedersen.

B. Jaschinski

In paragraph 9 of the Office Action, claims 1, 3-12, 16-20 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 6,136,041 Jaschinski et al (hereinafter "Jaschinski").

Applicants respectfully traverse the rejection.

Jaschinski oxidizes in other words "bleaches" fibres using hydrogen peroxide and free phenantroline, or derivatives thereof, present in a solution. The phenantroline or its derivative is not bonded to the fibre. Thus, in Jaschinski, phenantroline is not "a phenolic or similar group" attached to the fibre and the known solution is, indeed, very different from that of the present claims. For at least this reason, claim 1 is not anticipated.

Claims 3-12 and 16-20 depend directly, or indirectly, from claim 1 and are not anticipated for at least the same reasons.

Further, with respect to claims 5-11, since the phenantroline is not attached to the fibres, it is not a signalling agent as in the present invention. Nowhere has Jaschinski presented any data on nitrogen analysis of the fibres that would indicate any attachment. Further, there is no teaching that such bonding to the claims would be desirable. For this additional reason, claims 5-11 are not anticipated.

Accordingly, Applicants respectfully request withdrawal of the §102 rejection based on Jaschinski.

In paragraph 10 of the Office Action, claim 15 is rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over 6,187,136 Pedersen et al.

Applicants traverse the rejection for the reasons et forth above. Namely, Pedersen does not disclose, teach or suggest the incorporation of pherulic acid to fibre introduces a property

“foreign” to the fibre as recited in independent claim 1 and claim 15 depends from claim 1. Therefore, claim 15 is not anticipated and is patentable over Pedersen for at least the same reason.

Accordingly, Applicants respectfully request withdrawal of the rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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Jennifer M. Hayes
Registration No. 40,641